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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,453	09/27/2001	Koichi Hashimoto	24796	9553

7590

10/07/2002

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EXAMINER

LIANG, LEONARD S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 10/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,453

Applicant(s)

HASHIMOTO, KOICHI

Examiner

Leonard S Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Claim Rejections - 35 USC § 103***

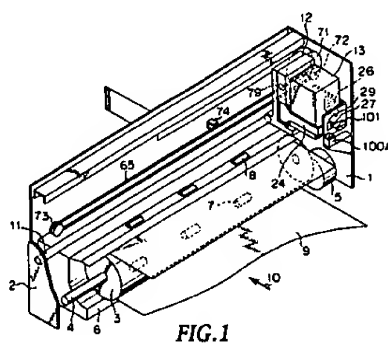
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura (US Pat 5777634) in view of Mitsuhsa (JP Pat 11-348385), and further in view of Horie et al (US Pat 5208640).

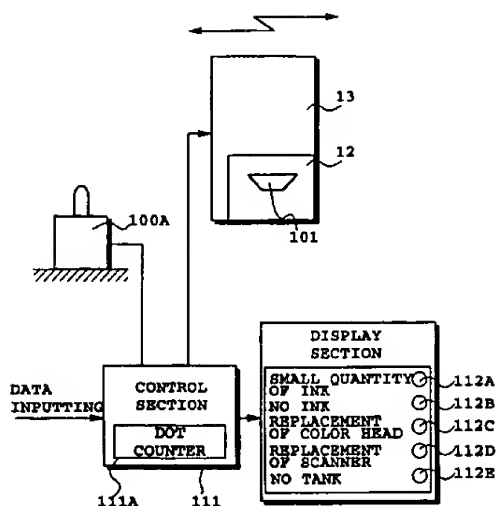
Okamura discloses, with respect to claims 1 and 7,

- a printing machine (See figure 1);



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- at least one paper feed unit (See figure 1, references 5, 9, and 10);
- a printed sheet transportation unit (See figure 1, references 3 and 5);
- an error detection unit/step (See figure 3, references 100A; column 12, lines 48-55. Error is represented by the ink quantity being below a predetermined quantity);



- error judging step judging that there is at least one error with which printing can be continued (“small quantity of ink”) and at least one error with which printing can’t be continued (“no ink”) - See figure 3, references 112A, 112B; column 12, lines 7-14. The storage device which serves to store an error classified table is thus inherent to the invention); thus, it is inherent to the invention that there is an error with which the printing operation of at least one of the image formation units can be continued.
- and a control unit (See figure 3, reference 111; column 12, lines 40-62. The dot count means determines between the “small quantity of ink” and “no ink” errors).

Okamura discloses, with respect to claim 2, that the control unit is capable of taking control of the printing machine in order to continue the printing operation without suspending the printing operation when the control unit judges the occurrence of an error with which the printing operation can be continued. Okamura teaches that the control unit continues printing even when an ink is reduced to a predetermined quantity or less (small quantity), though the ink detection time is shortened (See column 12, lines 55-62).

Okamura discloses, with respect to claims 3-8 that the control unit is capable of reporting the result of judgment (whether “small quantity” or “no ink”) to the user (See figure 3, column 12, lines 7-14). Hence, an error reporting step is disclosed.

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Okamura discloses, with respect to claims 5, 6, and 8 that the control unit is capable of reporting to the user information of the penalty in throughput when a current error as detected is an error with which the printing operation can be continued (where throughput penalty is the amount of ink, or lack thereof, left before the ink becomes empty. See column 15, lines 33-36). Okamura teaches that “a user can visually confirm a quantity of remaining ink at all times while preventing an unexpected occurrence of malfunction of ‘no ink’” (See column 17, lines 28-32).

Okamura differs from the claimed invention in that it does not disclose a plurality of image formation units each of which serves to perform a printing operation on a printing sheet, nor does it disclose transporting the printing sheets that have been printed to a common output location.

Mitsuhisa discloses, with respect to claims 1-8, a plurality of image formation units (See figure 1 and English abstract).

Horie et al discloses transporting the printing sheets that have been printed to a common output location (figure 2, reference 34). Horie et al teaches “In order to improve the collection of the printed recording sheets P, it is preferable that...sheet collecting means 5 for delivering the printed recording sheets P successively into a predetermined sheet discharge section is provided...” (column 2, lines 31-39).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the plurality of image formation units disclosed by Mitsuhisa into the invention of Okamura in order to perform a printing operation on a printing sheet. The motivation for the skilled artisan in doing so is to gain the benefit of being able to perform high speed printing while suppressing cost increase incident to parallel operation (See Mitsuhisa English abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Horie et al into the invention of Okamura so that printed sheets that have been printed are transported to a common output location. The motivation for the skilled artisan in doing so is to gain the benefit of improving the collection of the printed recording sheets, as taught above.

Response to Arguments

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Applicant's arguments filed on 08/15/02 have been fully considered but they are not persuasive.

Previously, the examiner asserted that "error is represented by the ink quantity being below a predetermined quantity". The applicant responded by submitting that low quantity is not an error. The applicant stated that "The advance notice of a "small quantity of ink remaining" is only a notice rather than an error...in the case of the present invention, the ink errors do not include the low quantity status of ink."

The examiner respectfully acknowledges the applicant's submission, but maintains that low ink quantity is indeed an error. The Merriam Webster's Collegiate Dictionary, Tenth Edition, defines "error" as: "the amount of deviation from a standard or specification". In this case, there is a standard of a normal amount of ink. When the invention of Okamura flashes the notice "small quantity of ink remaining", that is an indication that a deviation from the standard has occurs, or in other words error. The applicant claims an error detection unit, and that is exactly what the invention of Okamura does; it detects a deviation from a standard, an error. It does not correct the error, but it detects it nonetheless, as claimed in the applicant's invention.

As provided in the new grounds of rejection above, the transportation of printing sheets that have been printed to a common output location is taught in Horie et al (US Pat 5208640).

Final Rejection

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (703) 305-4754. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

lsl LSL
October 1, 2002


John Barlow
Supervisory Patent Examiner
Technology Center 2800